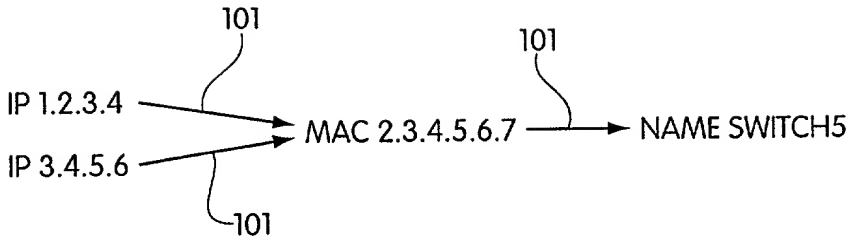

101
101
IP 1.2.3.4
MAC 2.3.4.5.6.7
NAME SWITCH5
IP 3.4.5.6
101

Fig. 1

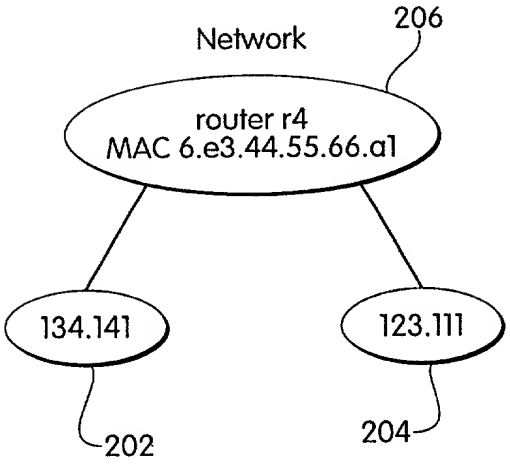

Network
206
router r4
MAC 6.e3.44.55.66.a1
134.141
123.111
202
204

Fig. 2

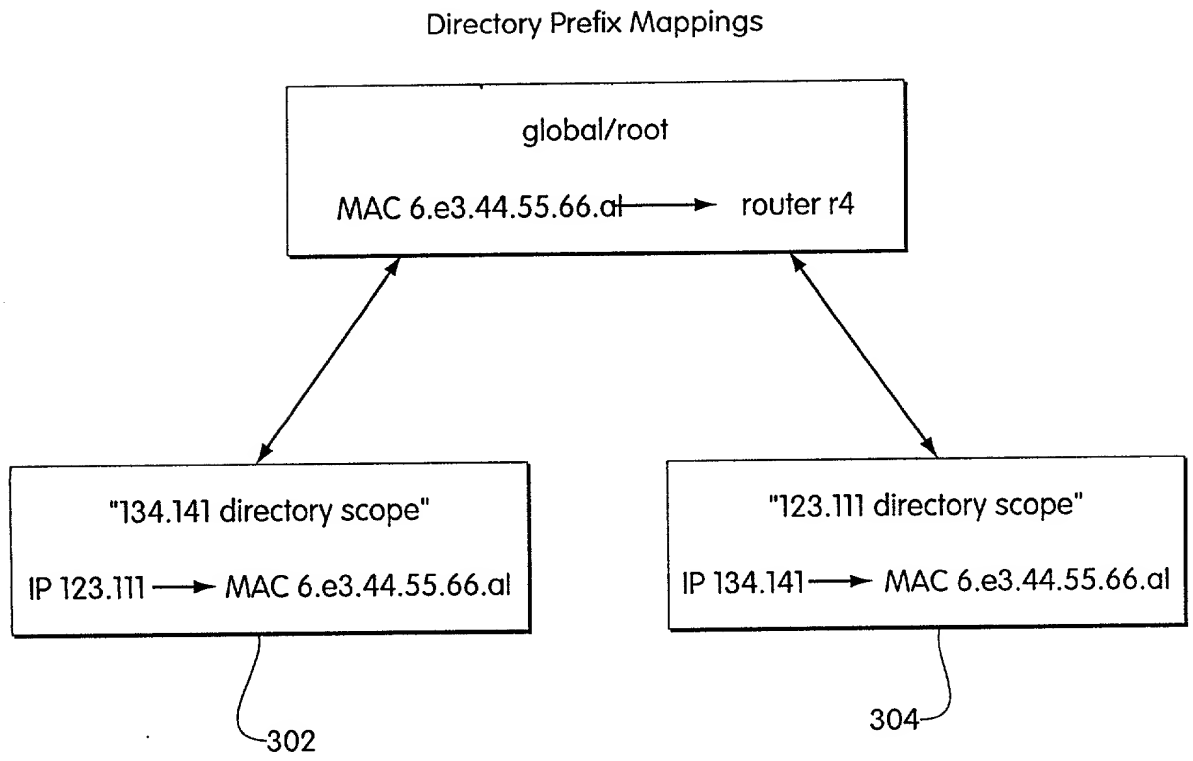
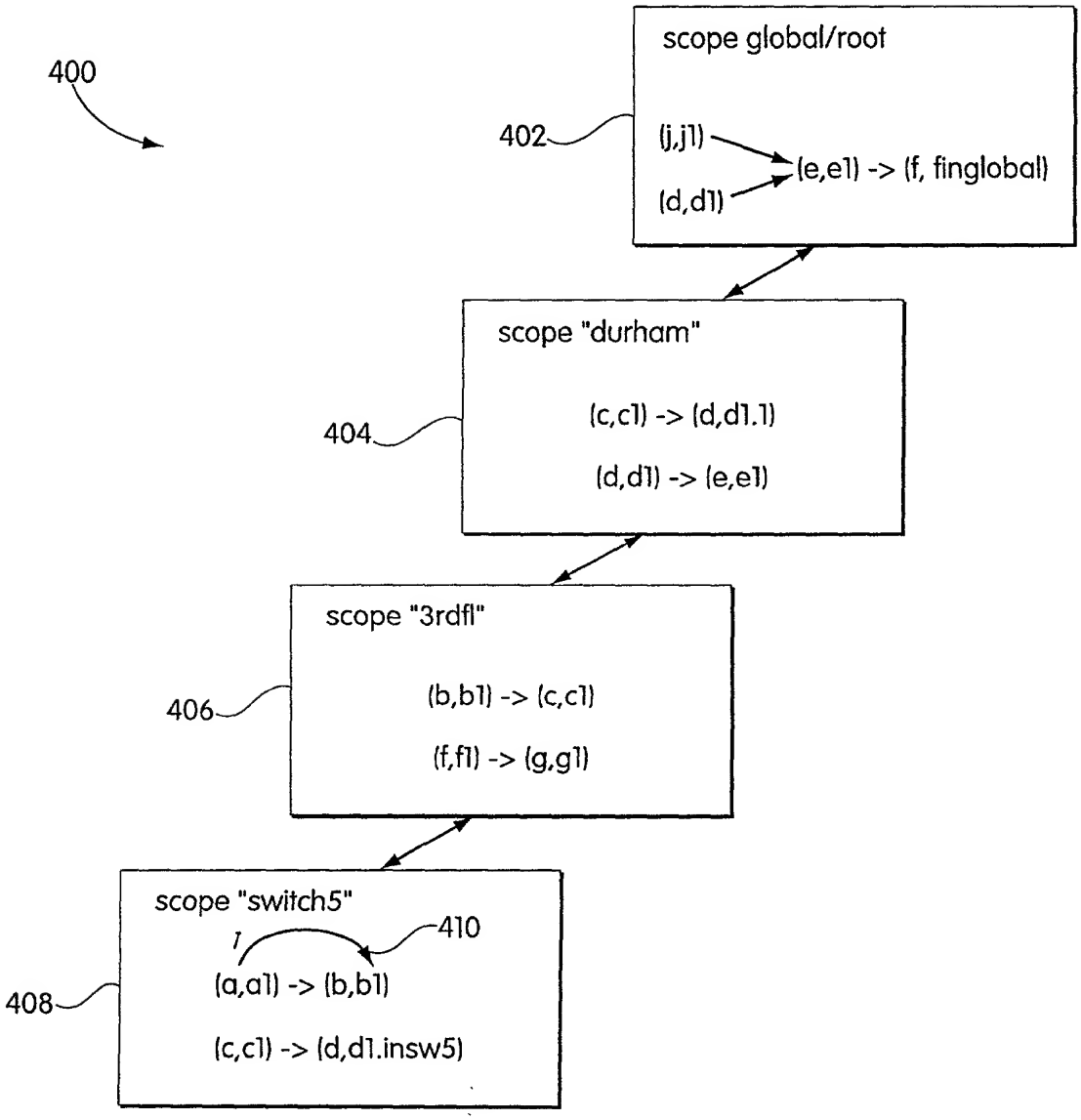

Directory Prefix Mappings
global/root
MAC 6.e3.44.55.66.al
router r4
"134.141 directory scope"
IP 123.111
MAC 6.e3.44.55.66.al
"123.111 directory scope"
IP 134.141
MAC 6.e3.44.55.66.al
302
304

Fig. 3

REQUEST 1
resolve (scope = switch5,ihs address=(a,a1), rhs type to find = b)



Resolves to b1 in switch5.

Fig. 4

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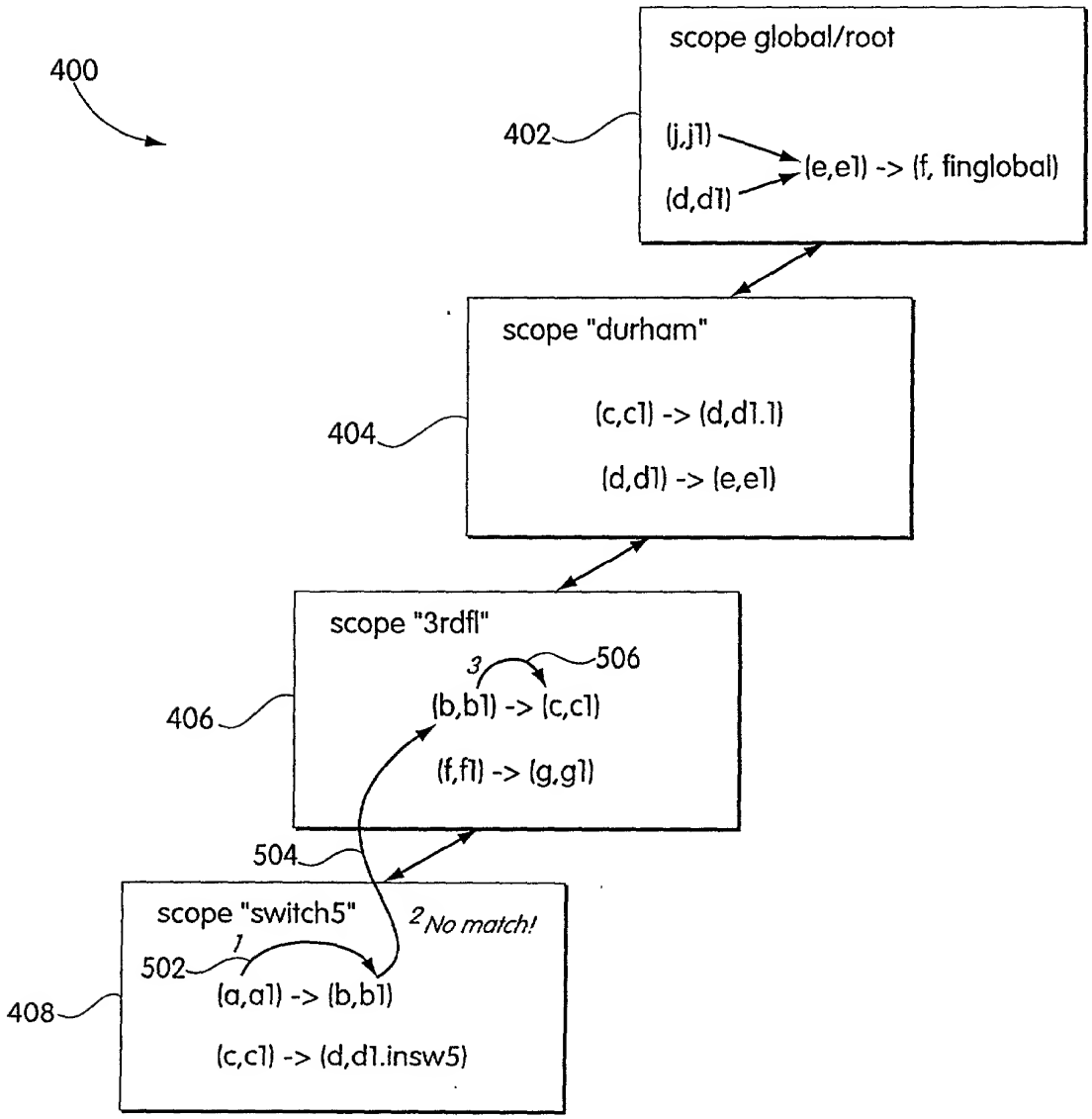
REQUEST 2
resolve (scope = switch5,ihs address=(a,a1), rhs type to find = c)

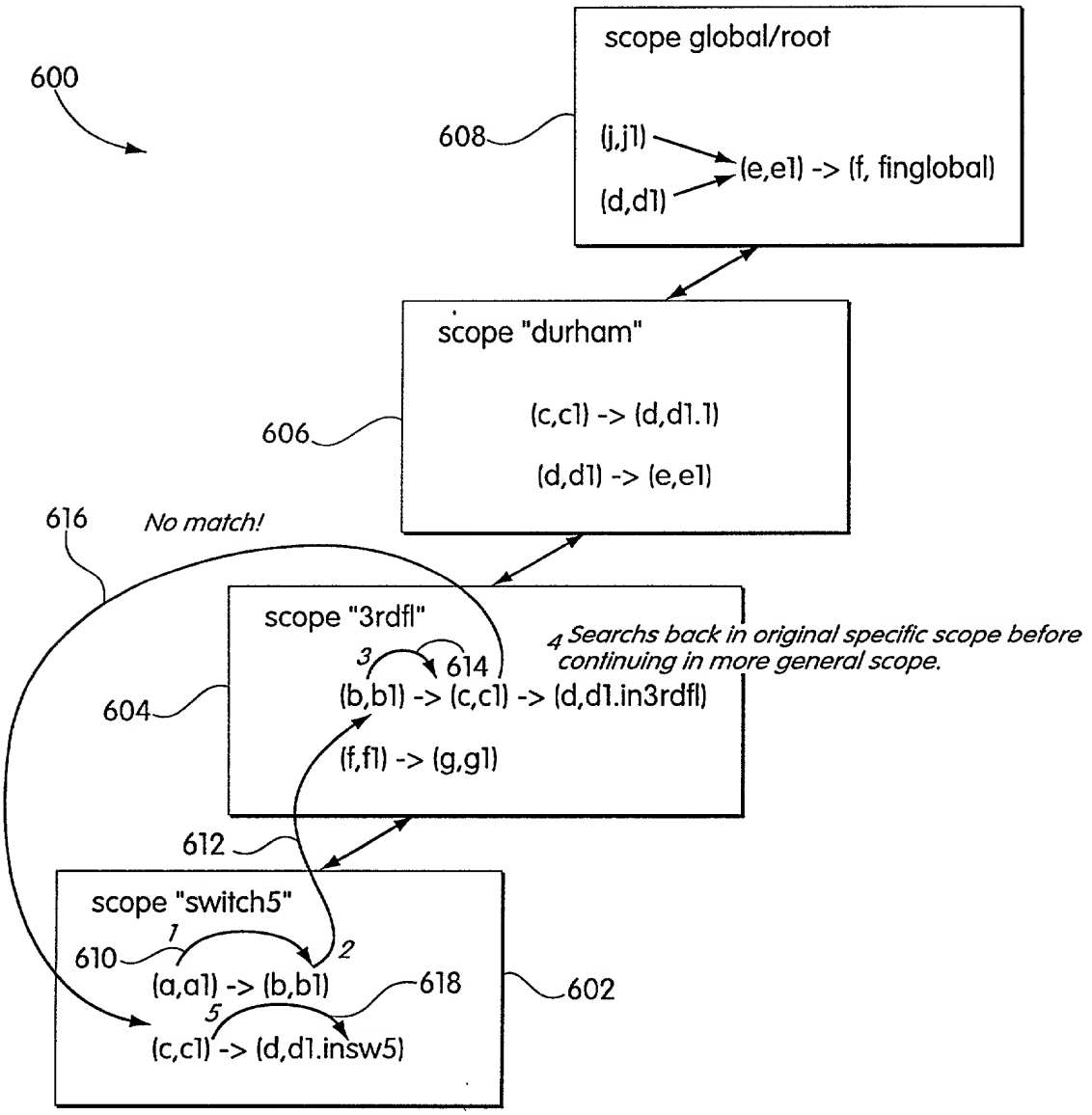


Resolves to c1 in 3rdfl.

Fig. 5

D62946.3 - 040901

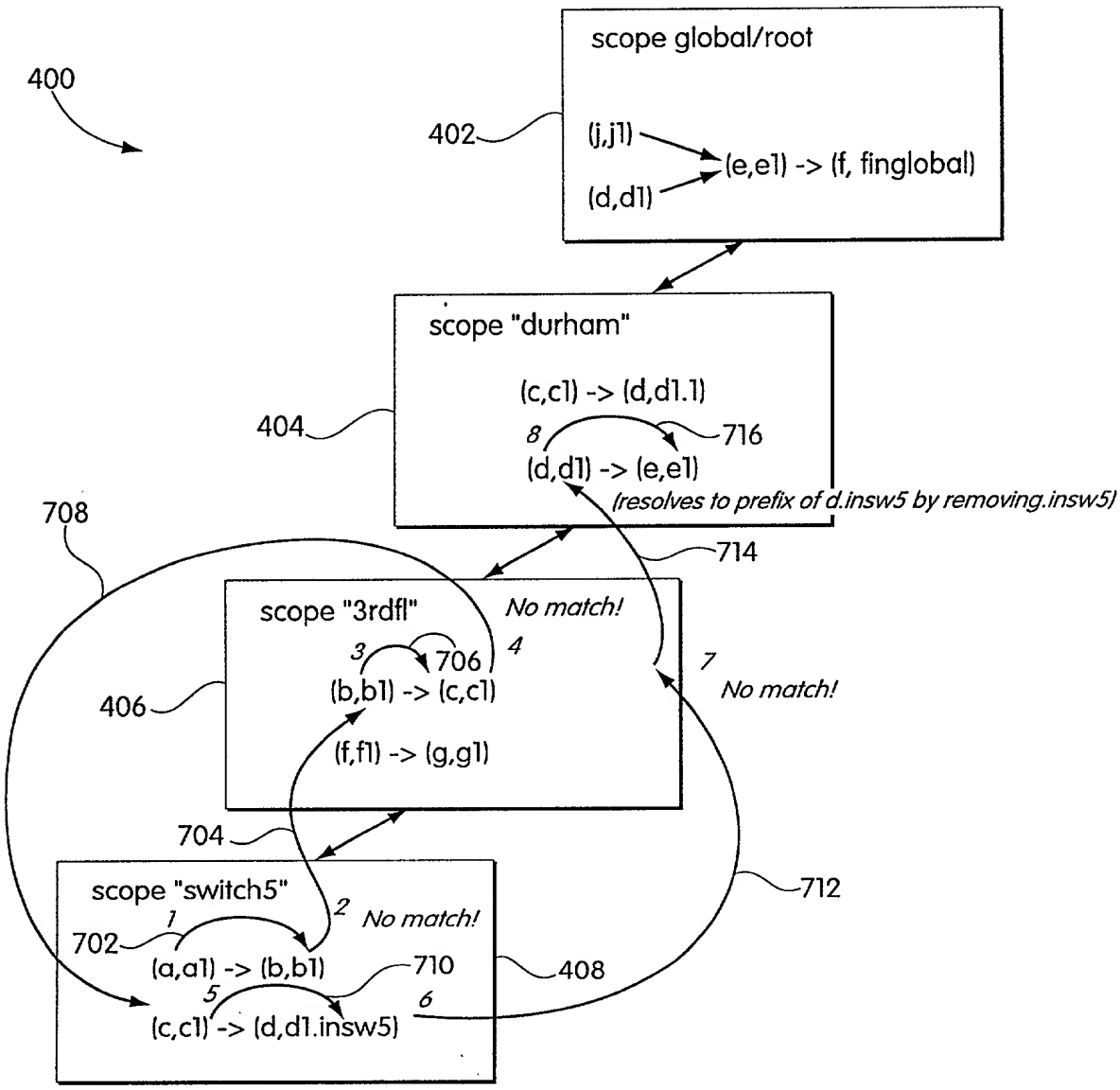
REQUEST 3
resolve (scope = switch5,ihs address=(a,a1), rhs type to find = d)



Resolves to 'd1.insw5 in scope switch5.

Fig. 6

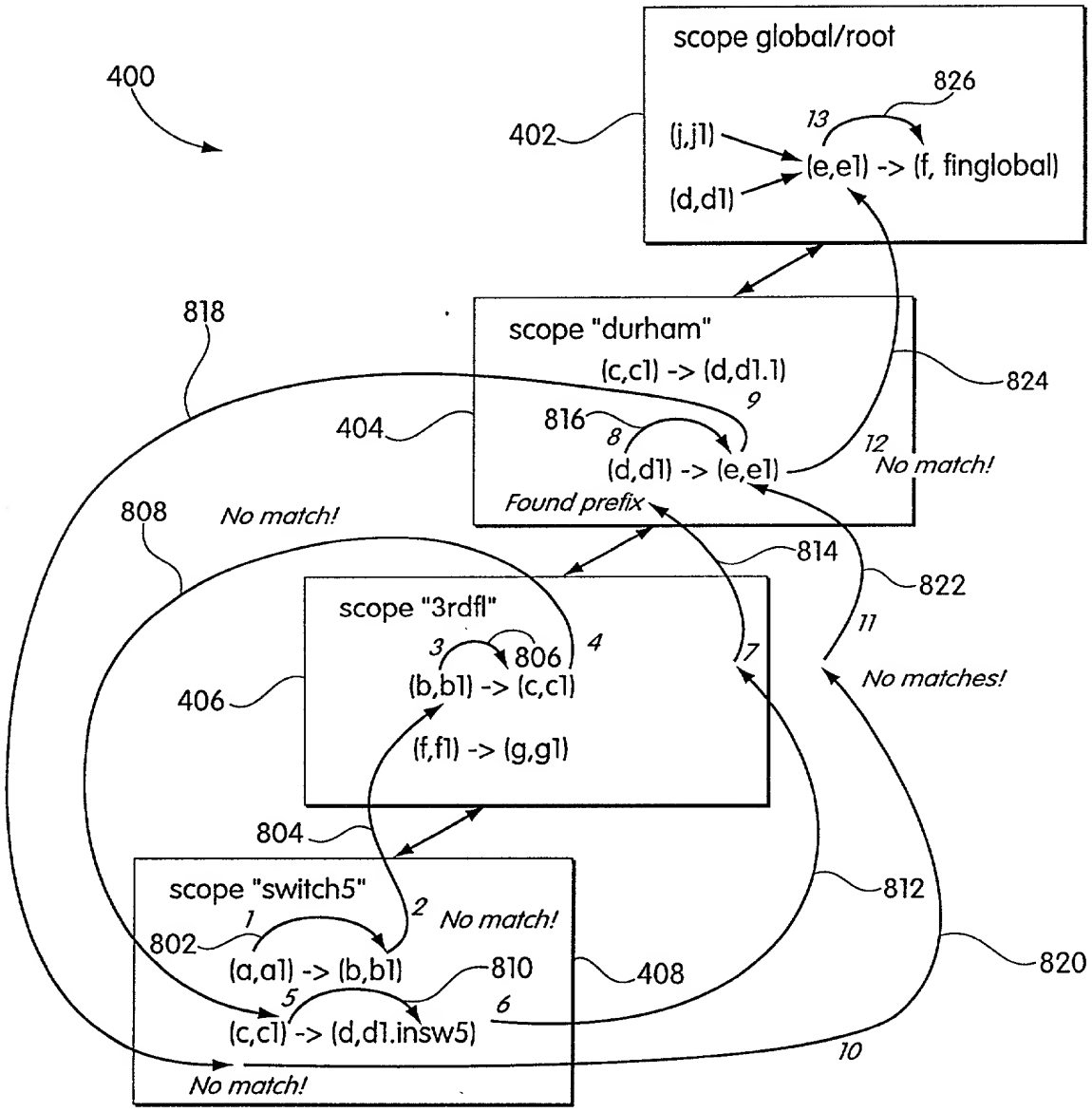
REQUEST 4
resolve (scope = switch5,ihs address=(a,a1), rhs type to find = e)



Resolves to e1 in scope durham.

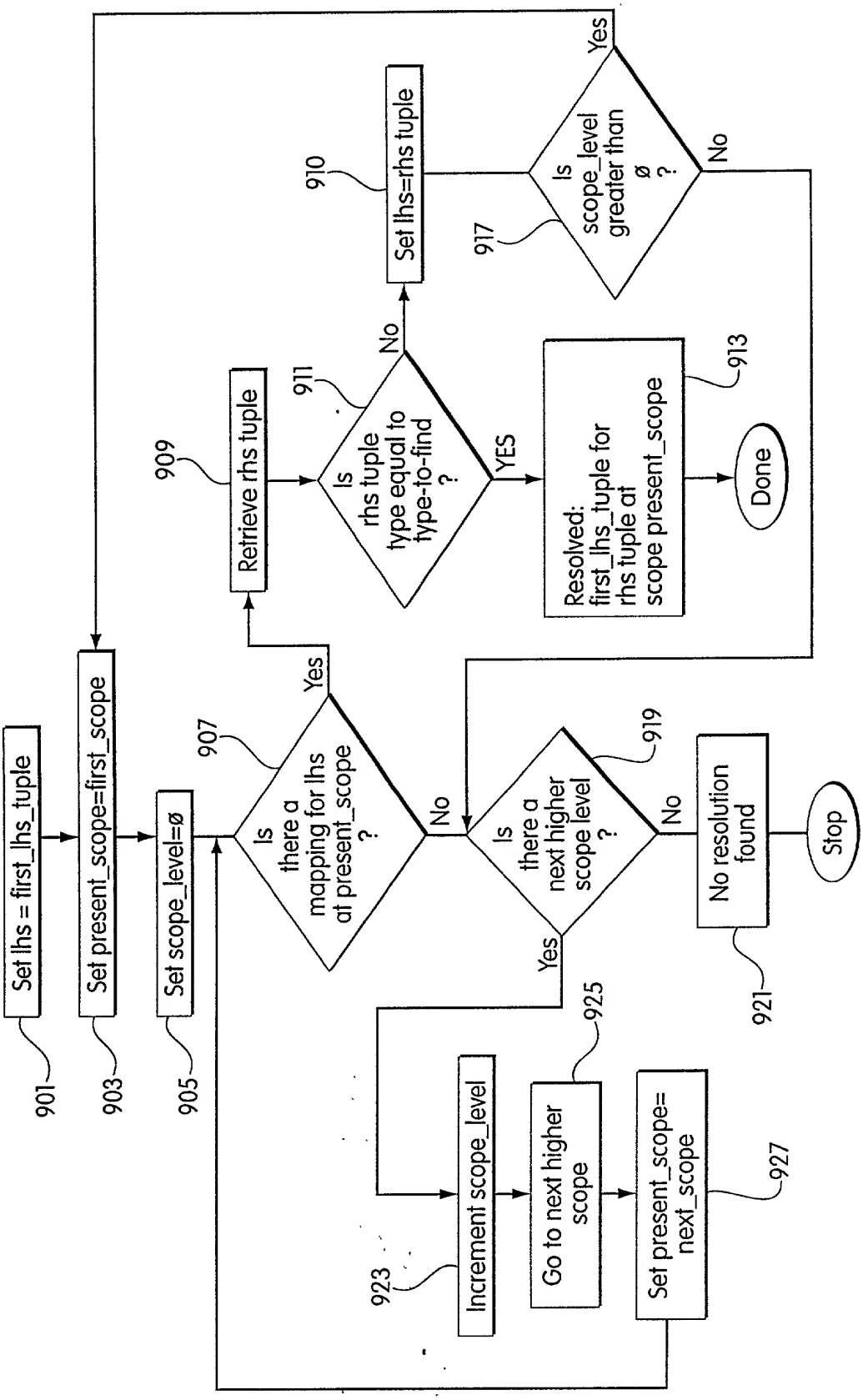
Fig. 7

REQUEST 5
resolve (scope = switch5,ihs address=(a,a1), rhs type to find = f)



Resolves to finglobal in the global scope.

Fig. 8


resolve (first_scope, first_lhs tuple, type_to_find)
Set lhs = first_lhs_tuple
Set present_scope=first_scope
Set scope_level=ø
Is there a mapping for lhs at present_scope ?
Yes
No
Retrieve rhs tuple
Is rhs tuple type equal to type-to-find ?
No
YES
Resolved: first_lhs_tuple for rhs tuple at scope present_scope
Done
Set lhs=rhs tuple
Is scope_level greater than ø ?
Yes
No
Is there a next higher scope level ?
Yes
No
Increment scope_level
Go to next higher scope
Set present_scope= next_scope
No resolution found
Stop
901
903
905
907
909
910
911
913
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919
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923
925
927

Fig. 9

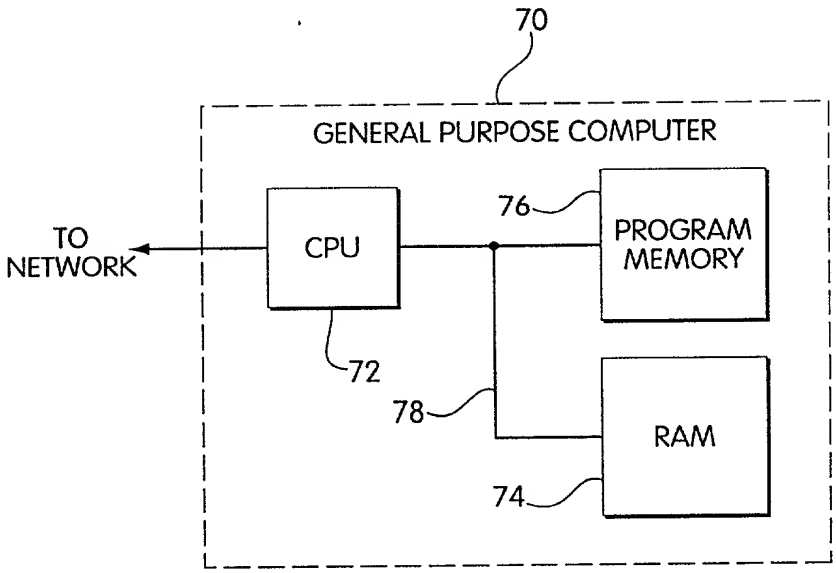
70
GENERAL PURPOSE COMPUTER
TO NETWORK
CPU
72
76
PROGRAM MEMORY
78
RAM
74

Fig. 10